

DIRECT CYLINDER INJECTION-TYPE SPARK IGNITION
INTERNAL COMBUSTION ENGINE

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ABSTRACT OF THE DISCLOSURE

10 A direct cylinder injection-type spark ignition
internal combustion engine is disclosed. The engine
comprises a spark plug, a cavity formed in the top
surface of a piston, and a fuel injection valve for
injecting fuel into the cavity in nearly the shape of a
fan having a relatively small thickness. When the fuel
15 injected in nearly the shape of a fan from the fuel
injection valve is considered by being divided into a
plurality of fuel segments in a radial direction, a side
wall of the cavity has a first fuel deflection passage
82a and a second fuel deflection passage 82b for so
20 deflecting at least two of the plurality of fuel segments
as to pass near the spark plug. The side wall of the
cavity is at least partly provided with a return portion
83 that protrudes toward the inside of the cavity. The
first fuel deflection passage is not provided with the
25 return portion 83 or is provided with the return portion
having a short protrusion, and the second fuel deflection
passage is provided with the return portion 83 having a
long protrusion.